

**Eastern Michigan University**  
Institute for Geospatial Research and Education  
Ypsilanti, MI

The WebPolis Consortium, a project to encourage  
greater community involvement in local decision-making  
using enhanced Internet technologies

## **B. Project Narrative**

### **Project Purpose**

The Information Technology revolution has become an important part of our society, and it is important, even critical, for local communities to become more reliant on online resources. Many such resources are available. However, local governments and their resident populations have difficulty making full use of online resources and applications because of many disparate formats. There is a great need to create a network for providing online applications for local communities with interfaces that are more standardized, interactive, linked and user-friendly.

This is a proposal supporting the development of the "WebPolis Consortium," a project with two distinct components. The first component is development of a common portal for a set of online applications (a community "toolbox") to link local communities in their information sources and decision-making support services. Special emphasis would be given to 1) meta-linking of existing applications and technologies between communities, 2) development of new application modules if needed, and 3) investigation of the human-computer interface for end users.

The second component is establishment of a "consortium" of communities, an online network of user communities with common resources and services shared by their citizens and local officials. The consortium would encourage community leaders to share resources and information with leaders in other communities, developing a wealth of commonly needed input to be shared between communities in an efficient, effective and user-friendly way. End users would access the consortium's information databases and applications through the WebPolis portal, an access that would allow a common interface to all users, all communities, and all information and databases. Meta-linking within the portal would link information from user community databases, both with each other and with databases maintained by a common host server. Access privileges to these databases would be as set by each community.

Two demonstration projects will assess, throughout the project's development, its system design and functionality, test community applications within the portal, and evaluate the common user interface. Albion and Ypsilanti, Michigan, have agreed to be demonstration communities. Ypsilanti's demonstration project will demonstrate how government agencies, community organizations and citizens can interact together online to develop consensus on alternative recommendations regarding the location of an important access to the city's riverwalk system. Albion's pilot project will illustrate how a community can use WebPolis to support a decision process concerning economic development of a vacant parcel of land. The goal is to demonstrate the utility of WebPolis in supporting community decision making to resolve emerging issues.

Partners in the consortium during its first phase include the cities of Albion and Ypsilanti, the Washtenaw County, Michigan, Administrator's office, the Forks Organization of Calhoun County, Michigan, the Albion Economic Development Corporation, Eastern Michigan University, Albion College, and the Michigan Society of Planners. The longer-term goal of the WebPolis Consortium is to include additional communities and organizations and have the Consortium self-sufficient within three years, with administrative costs supported through user fees.

### **Innovation**

#### Intrinsic merit of the project

The WebPolis Consortium project will rely on the use of "virtual collaboration." This level of online interaction represents the third generation of online communication technology. The first generation, using "shared ideas," relied on technologies such as e-mail, bulletin boards, and Intranets for basic communication. The second generation allowed for "shared creation," using application sharing, screen sharing, electronic

meeting systems and whiteboards for coordination. The third generation, which the virtual world is now entering and which forms the basis for the WebPolis project, uses "shared space." It utilizes networked virtual work environments in which participants interact in a mode of collaboration.

This new generation of applications must utilize a thorough understanding of the processes by which real human beings collaborate in a virtual environment. These processes include a number of points addressed in the WebPolis project, and serve to illustrate the significance of its cutting-edge approach.

A collaborative tool: WebPolis is a tool for communities to share information with each other in a user-friendly and coordinated online environment. This inter-community collaboration happens both through shared applications, resources and databases on the WebPolis main server and through online discussion conferences. It is more than communication; it is more than shared creation; it is true collaboration in a way not possible before the general availability of new technologies.

Based on best practices: It is recognized that technology alone does not bring about a collaborative environment; it is also critical to understand and solve problems of human-computer interface (HCI). The WebPolis project will initially develop models to test best practices, with local officials and residents in the two demonstration communities surveyed throughout the project development period to determine the ease of use of project applications.

Support complex webs of interaction: The WebPolis infrastructure will be complex, since it will support diverse applications in varying user environments with different interfaces. However, the complexity will lie within the WebPolis "toolbox"—the software contained on the main server. On the user side of the portal, the interface will be simple, coordinated and user-friendly, utilizing a query format for most interactions between the user and server. The demonstration model will test various query systems and will survey users regarding ease-of-use, clarity and compatibility of various formats. The system is being designed to support, through the WebPolis portal, compatibility with all current, normal online uses.

Asynchronicity: The asynchronous aspect of going online—having access to information at any time, from any place—gives more flexibility to users to participate according to their own schedule, rather than according to a schedule defined by others. Initial studies have shown this may be one of the most important advantages of the online environment.

Utilization of existing technologies and applications: The WebPolis project will utilize applications and information databases already developed by the WebPolis staff. They include an integrated discussion conference, over 200 topic web pages on city issues, spatial (GIS) and financial databases, an online survey application, and the unique "Decision Action Process" for decision support. The primary direction for development will be the integration of these existing tools and applications, and their adaptation for a user-friendly interface.

Human experience as the core of the collaborative experience: The WebPolis project is based first and foremost on the concept of being user friendly. Potential user groups (residents and local officials) typically will have little technological sophistication. The technology utilized in WebPolis, although significant and state-of-the-art, must appear simple and clear on a user's screen.

The information can be "mined" by users at various depths, with basic surface information easily and readily accessible in a simple query format. However, more detailed information will be available for users who wish to dig deeper. The user defines what level of technology he or she wishes to use, with the basic level serving as the default condition.

## Innovations

The WebPolis Consortium brings significant innovations to current practice in online communications for local communities. WebPolis utilizes existing applications and technologies in new ways to create a virtual online, collaborative decision-making environment.

Knowledge base: The knowledge base aims to improve the performance of community decision-making through knowledge and information based on successful professional experience. It has two components—an expert system and a case study system. The expert system is a series of approximately 200 web pages of information on issues of community planning. It allows decision makers and the public to utilize expert knowledge.

The case study system accumulates prescribed data on successful and unsuccessful planning cases into a common database. A well-maintained and organized case study system will help citizens and local officials by comparing similar cases with archived solutions.

Decision Action Process: WebPolis includes a “Decision Action Process (DAP)” model to aid local officials and residents in developing consensus on local decisions. The process is initiated by a local official needing input on a public issue. Using conferencing software, the process is initiated by designating individuals or groups eligible for participation. Such a discussion group would be defined as appropriate for the issue, and could be selected individuals, members of selected groups, or the public in general. Preliminary decisions are formulated by a “self-weighted iterative voting” process, a consensus building process adapted from the more common Delphi format. (A diagram of the process can be found in the Appendix.)

Reference Digital Libraries: City and township reference digital libraries on the WebPolis server provide citizens and local officials with a pertinent reference source base. The libraries serve as a reference and guide for WebPolis communication, coordination, documentation, and technical support and assistance. The libraries have six primary topic webpage categories—public policy, land use, transportation, environmental, community, historic preservation. Residents and local officials could find the explanation/definition of technical terms, related laws, and standard processes by using reference digital libraries.

Meta-data harvesting: WebPolis applications are structured to allow “meta-data harvesting” of information from various sources. This is possible by linking the software used by Consortium communities in an “Open Archive Initiative” in which local programs will be linked and utilized by the WebPolis main server. These links will be utilized only after approval by the host communities.

## **Diffusion Potential**

In communities across the United States, local officials and community residents recognize problems bridging the “digital divide.” The WebPolis Consortium focuses directly on this problem and establishes a working prototype for online community planning and decision-making that is applicable to all communities.

The demonstration communities participating under this proposal, Albion and Ypsilanti, Michigan, have demographics similar to those found in a larger urban area. Yet because of their smaller population, they are ideally suited for use as a testing ground for innovative ways of testing the WebPolis applications, while allowing for development of future applications for larger communities.

The WebPolis Consortium ties to the resources of a major university (Eastern Michigan University) and a private college (Albion College). End users will benefit from the diffusion that is a significant part of these differing academic environments. Creating and nurturing partnerships between universities and communities is an important aspect of the WebPolis Consortium project, and these partnerships can be replicated in both small and large communities, proving mutually beneficial to both “town” and “gown.”

## **Community Involvement**

The WebPolis Consortium links citizens and local officials to three types of available online resources—1) resources developed and made available by Eastern Michigan University, 2) resources generally available on the web and 3) most importantly, resources shared between Consortium communities. The focus of the Consortium is to create common linkages between databases and computer resources requested and used by communities. Through these agreeably shared resources, leaders and citizens will benefit from the knowledge and experience offered by each community. WebPolis provides a common interface infrastructure useful to virtually all communities.

The goal is to expand the Consortium to include many communities in the Midwest region as members within the next three to five years (with a target of 30 member organizations) and have the Consortium become financially self-supportive through annual user fees.

### Initial Consortium member communities

One county government, one regional organization and two local communities have been selected as founding members of the Consortium—Washtenaw County, Michigan, the Cities of Albion and Ypsilanti, Michigan, and the Forks Initiative of the greater Albion community. Local officials in these agencies and communities have identified issues of priority to demonstrate the effectiveness of the project model in promoting effective decision-making using online resources. Ypsilanti and Albion will serve initially as the demonstration communities. Both communities have a relatively large lower income, minority population with significant needs for services from local government.

#### Ypsilanti, Michigan

Ypsilanti is one of two demonstration cities currently forming the initial WebPolis Consortium. The initial demonstration project will be in conjunction with the city's Community Development Department.

WebPolis also has been included in a program coordinated by Eastern Michigan University's Institute for the Study of Children, Families and Communities, supported by the city, the university, local agencies, and the U.S. Department of Housing and Urban Development's Community Outreach Partnership Center (COPC) Program. This \$1.2 million, 3-year proposal incorporates WebPolis as a key component. The COPC project's goals include drawing together the many disparate community organizations found in any city. The WebPolis project deals directly with the resolution of issues in an online environment and the encouragement of all sectors of the community to be involved in such discussions, thus spanning the digital divide.

#### Washtenaw County, Michigan

Washtenaw County will serve as a primary partner in the community outreach aspect of the WebPolis Consortium. The County Administrator initiated this partnership, and his office will provide major in-kind support for the project through the active involvement of its Information Technologies staff.

Washtenaw County is committed to providing technology resources to its communities through its current "E-Government" program, a successful endeavor now entering its third phase, which supports online interactive decision-making. The County also has a strong community outreach initiative. Rated as the 4th most densely networked county in the U.S. on the Internet (matrix.com), it is well equipped to support the WebPolis project and underscores the community's readiness for an active E-Government program.

Washtenaw County's Strategic Plan includes three strategies that tie directly to the WebPolis concept. This "new model for service delivery" includes the following as guides to implementation:

- Community engagement: This will be implemented through Community Focus Groups, Employee Focus Groups and an E-Government Evaluation Team;
- Phased implementation: The County's E-government program has three implementation phases. It has completed its E-information phase, an effort to have information web pages for communities. It has recently instituted the E-commerce phase, which allows for online transactions of county functions. The final phase will be E-democracy, in which online decision support services will be developed for use by citizens and officials.
- Portal access: Portals—single points of entry from which a network user can access related information or services—represent a logical means of organizing and accessing the services and information that constitute Washtenaw County's E-Government program. Initially, three portals are recommended: 1) Payment/Bill Portal; 2) Public Participation Portal; 3) Intranet Portal.

(A portion of the County's Strategic Plan is included in the Appendix.)

### Albion, Michigan

The City of Albion has taken great strides to become a "wired" community. The Greater Albion Alliance was founded in 1990 because city and county governments were not addressing the pressing issues facing the community. The "Smart Community" vision was established in 1999. Ownership by the community in this effort has been significant. The city's Smart Centers program places computer centers in lower-income neighborhoods, with computers linked to the Internet.

Thus far, Albion's Smart Community program has generated foundation grants of \$150,000 for an Executive Director of the Greater Albion Alliance and it is anticipated that person will generate enough grant support to sustain the position. A \$1 million Gerstacker Foundation grant has also been procured, and will be paid out at \$200,000 annually for five years and be used to enhance the vision with a few big-ticket items.

The WebPolis demonstration project, in partnership with the Albion Economic Development Corporation, will involve decision-making relating to development of a vacant industrial parcel and will incorporate the WebPolis Decision Action Process. In addition, in the Fall of 2000 students in the EMU Urban and Regional Planning Program successfully worked directly with city officials and representatives from Albion College on an experimental online project—planning and a user survey for a children's museum.

### The Forks Initiative, Greater Albion, Michigan

The Forks Initiative, which is an initial member of the WebPolis Consortium, is a community-wide organization that provides local access to electronic information in the greater Albion community, currently including the city and two adjacent townships. Its mission is to research, develop and implement information technologies that help build a stronger community. The Forks Initiative provides local access to electronic information that meets the diverse educational, cultural and informational needs of the community. Local partner organizations of the Initiative include Albion College, Albion Public Library, Albion Economic Development Corporation, Albion Public Schools, Albion Area Chamber of Commerce, Trillium Hospital, Albion Volunteer Service Center, City of Albion, Starr Commonwealth School, and Woodlands Library Cooperative.

### WebPolis support agencies

EMU's Institute for Geospatial Research and Education (IGRE): The WebPolis project benefits from the continuing involvement of the Institute, which provides and maintains the host server and also provides critical technical and programming support for the Consortium. IGRE has successfully worked with a variety of community organizations and other schools in training and the development of analysis programs and software, and has developed millions of dollars in funding for these specialized programs. Since its inception, its mission has been to provide technical support services in the areas of database design, programming, customization and geographic information systems to

county and municipal government agencies, non-profit organizations and the consulting industry.

(More information on the Institute for Geospatial Research and Education can be found in the Appendix.)

EMU's Urban and Regional Planning Program: WebPolis has grown out of a project developed as part of the Planning program's curriculum—the "Rivertown Simulation." Begun in 1989 as a classroom exercise for planning students, the Rivertown Simulation has received national attention as an illustration of the use of the Internet for local decision-making. Resources include creation of 200+ web pages with topical material on community redevelopment and downtown revitalization. Students also have interacted with local officials, residents and students through web conferencing software developed at EMU.

(More information on the Rivertown Simulation can be found in the Appendix.)

Albion College: For the past six years, Albion College has been conducting a project to build a technology infrastructure in the Albion community contributing to the city's economic development and improved educational opportunities. The College has a deep commitment to developing the economic and community resources within the city. In recent years, activities have included:

- Internet classes for the community;
- Training for education and business users of new technology;
- Grants for teachers to develop curriculum and/or attend professional conferences;
- Collaborative efforts (DIAL, cable television programming, satellite programs) with the Albion Public Library;
- Continued work on city fiber plan including cable franchise negotiations;
- Toll-free access to the Internet for everyone;
- Public sites for Albion residents and volunteer organizations to gain access to the Internet;
- Automated online catalog systems in the Albion Public Library and the Albion Public Schools libraries.

Michigan Society of Planning (MSP): The MSP is the largest statewide organization representing professional and lay planners in the country. The Society fully supports development of the WebPolis Consortium as a leading edge tool in making local planning available to the broadest audience of constituents, since it will encourage interaction between professionals and local residents and officials. In addition, the executive director of the Society has indicated a willingness to assist in the promotion, marketing, and dissemination of the project throughout the state.

## **Project Feasibility**

The Work Plan for the WebPolis Consortium project reflects agreements by the project communities and the WebPolis staff. Year 1 involves the development of the WebPolis platform (portal) and applications and their utilization in the initial demonstration projects. Monitoring of these efforts will be accomplished through establishment of an Advisory Board and a Project Evaluator. Also, additional funding from other sources will be solicited for hardware support, especially in the demonstration communities.

The demonstration project in Ypsilanti, Michigan, will be closely tied with Washtenaw County's "E-Democracy" project, an effort to involve the public in community decision-making. The Ypsilanti demonstration project will utilize the WebPolis Decision Action Process to gain consensus on an issue relating to the city's Parks and Recreation Plan. The issue is the preferred location of a link in the riverfront trail system across a major road arterial, and whether the access should be at grade (road) level, above grade or below grade. This initial consensus on the riverwalk system will initiate a broader series of studies on links across an interstate highway, easements along privately owned

riverfront properties, proposed park amenities, and a series of other decisions that would benefit from the online decision-making environment used by WebPolis.

The demonstration project in Albion, Michigan, will develop an economic development model for the Albion Economic Development Corporation. The model will serve as a decision-enhancing tool linking potential investors to community assets. The demonstration project will combine various online-based resources (including census, business and property value databases; geographic information systems (GIS) analysis tools; topic information web pages relating to economic development; financial analysis databases) with local resources (computer conferencing with local agency officials; tie-ins with Albion's "Smart Community" technology; use of students from Albion College's Ford Institute for Public Policy and Service). The Decision Action Process will be initiated by the city's Economic Development Director to build consensus on the best development of a large vacant parcel on the city's fringe.

These demonstration projects will test project applications and overall feasibility and usability. Because of the number and diversity of the project's initial partners, dissemination of information should be rapid and growth of the Consortium should happen quickly.

## **Evaluation**

The evaluation of this project will be conducted by an independent faculty evaluator from Eastern Michigan University's Center for Research Support, using well-accepted evaluation practices. The evaluation will employ tracking of usage, online surveys, and focus groups to determine the degree to which the project goals have been accomplished. Much of the evaluation during the early stages of the project will stress formative rather than summative evaluation, in that the information from the demonstration projects will be used to inform later stages. The surveys will, in general, allow participants to report on increases in efficiency and effectiveness using WebPolis in reaching project goals and objectives.

WebPolis primarily is geared toward three user groups—local agency officials, local elected officials, and residents. It is anticipated, based on previous experience, that initially local agency officials will be primary users. Elected officials may be reluctant to embrace online decision-making tools for political reasons, and residents may be slow to adopt it because of access limitations, fear of technology, concern about privacy, lack of perceived need, and overcoming inertia of traditional methods of involvement, or lack thereof. Other groups to use WebPolis will include: residents of non-Consortium communities, information technology researchers, students, professional consultants, and the general online public. Each of these user groups will be surveyed to determine barriers to use and to suggest ways to overcome those barriers.

Evaluation of the WebPolis Consortium will include instruments to gauge need, usefulness, effectiveness and efficiency. Instruments will be created for user communities and will include a broader survey on non-user communities to gauge the potential level of interest and need. This will be accomplished more directly through a conference format, where potential members meet and hear from existing members and provide input, especially on needed applications.

Evaluation will include tracking of online use of the portal and various project applications within the portal. Tracking will include a continuing use survey based on user IDs and user characteristics. For each of the goals and objectives below, the evaluation will include a combination of online and hardcopy surveys (S), tracking (T), and focus groups (F).

### **Goals:**

- Enhance decision-making in local government, using Internet technologies to:
  - Provide intelligent decision-making tools to local officials and citizens (S, T, F);

- Provide greater information resources to local decision-makers and citizens (S, T, F);
- Encourage greater public input into local decision-making (S, T, F);
- Efficiently share information sources between communities (S, T, F);
- Serve as a training project for students in the field (S, T, F).

**Objectives:**

- Develop a computing-services utility allowing local citizens remote access to data, computational resources and online discussion conferencing (S, T);
- Develop a common, easy-to-use access interface appropriate for all communities (S, T);
- Develop a means of mediating queries from multiple community information sources (S, T);
- Develop remote collaboration tools for network information systems among local citizens and their governments, other levels of government, and universities (T);
- Develop a trained staff to administer the program and serve as community consultants (T);
- Have the project be self-supportive within four years (T).

**Project Work Plan**

**Table1. WebPolis Consortium Work Plan (Sept. 2002 – Aug. 2003)**

<b><u>Work Items</u></b>	<b><u>Quarter 1</u></b>	<b><u>Quarter 2</u></b>	<b><u>Quarter 3</u></b>	<b><u>Quarter 4</u></b>
WebPolis system design and tools integration	XX	XX	XX	XX
Develop demonstration project for Albion, Michigan (Economic development model)	XX	XX	XX	
Develop demonstration project for Ypsilanti, Michigan (Parks and Recreation model)	XX	XX	XX	
Establish WebPolis Advisory Board (Professionals and local officials)		XX		
Establish WebPolis Consortium organization	XX	XX	XX	XX
Develop, implement and field-test WebPolis prototype modules		XX	XX	
Training for officials and residents in Albion and Ypsilanti		XX	XX	
Administer evaluation sessions with local officials			XX	
Dissemination / marketing through publications, presentations, workshops and websites			XX	XX